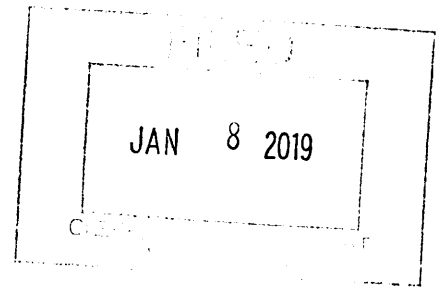


UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF VIRGINIA
Norfolk Division



COLUMBIA GAS TRANSMISSION, LLC,

Plaintiff,

v.

Civil No. 2:17cv483

GROVE AVENUE DEVELOPERS, INC.,

Defendant.

OPINION and ORDER

This matter is before the Court following a bench trial resulting from an easement dispute in which both parties seek a declaratory judgment. Such dispute arises from Grove Avenue Developers, Inc.'s ("Grove" or "Defendant") desire to construct an asphalt roadway crossing over two high pressure natural gas pipelines (the "Pipelines") operated by Columbia Gas Transmission, LLC ("Columbia" or "Plaintiff"). Columbia filed the instant action seeking an injunction and declaratory judgment prohibiting Grove from building the planned roadway across Columbia's easement. Grove, in turn, seeks a declaration that it be allowed to construct the proposed roadway because such crossing does not unreasonably interfere with Columbia's easement rights.

I. Findings of Fact

A. Preliminary Summary

It is undisputed that the real property that Grove seeks to develop into a small condominium complex is owned by Grove subject to Columbia's easement to "lay, maintain, operate and remove a pipe line, or pipe lines." ECF No. 20-2. Although Columbia is the holder of the dominant estate, the terms of the written easement require Columbia to maintain its Pipelines "below cultivation, so that the Grantors may fully use and enjoy the premises, subject to the right of the Grantee to maintain and operate said line or lines." Id.

Notwithstanding Columbia's view that it has the authority to categorically prohibit Grove (and presumably other landowners) from constructing any roads across Columbia's buried transmission pipelines, Columbia is willing to allow a crossing on Grove's property, but only if Grove first agrees to pay for the following costly mitigation measures:¹ (1) excavation of the Pipelines passing under the proposed roadway; (2) removal of the Pipelines' protective coatings to allow a visual inspection of the Pipelines, followed by installation of new protective coatings; and (3) the

¹ A degree of confusion exists as to whether Columbia asserts that it has the legal authority to block any and all crossings irrespective of the manner of construction. It appears to the Court that Columbia's viewpoint is that it could block all crossings, but that it does not seek to do so, either in this case, or in similar factual scenarios (as reflected in Columbia's own published policies and procedures).

installation of "flowable fill" over and around the excavated Pipelines.² Grove, however, maintains that the mitigation measures demanded by Columbia, which are estimated to cost several hundred thousand dollars, are unnecessary because the scientific evidence demonstrates that Grove's proposed crossing will not endanger the integrity of Columbia's buried Pipelines. Grove also disputes Columbia's contention that the road crossing proposed by Grove, by its nature, unreasonably interferes with Columbia's right to maintain, inspect, and repair its pipelines. Each party's trial evidence hinged, in large part, on the testimony of their respective expert witness.

B. Stipulated Facts³

1. Columbia is a Delaware limited liability company . . . [that] maintains and operates approximately 15,000 miles of natural gas transmission pipeline throughout the country, including hundreds of miles of pipeline in Virginia.

2. Grove Avenue is a Virginia corporation . . . [that] owns certain land in the City of Suffolk, Virginia (the "Property").

3. Grove Avenue acquired ownership of the Property by deed.

² As described at trial, "flowable fill" is a pourable mixture similar to concrete that, when mixed correctly, can be excavated with hand tools.

³ The following facts were stipulated by the parties prior to trial. ECF Nos. 20, 40. The Court has altered the numbering on such stipulated facts and omitted certain additional stipulations for the sake of brevity.

4. On or about October 12, 1950, Victoria Rountree ("Ms. Rountree") and Commonwealth Natural Gas Corporation ("Commonwealth") executed an agreement granting Commonwealth a right of way through the Property for the installation, operation and maintenance of one or more pipelines (the "Easement") in exchange for the payment of \$568.00.

5. On or about November 16, 1964, Commonwealth and Rountree Dairy, Inc., the then-owner of the Property ("Rountree Dairy," together with Ms. Rountree, the "Original Grantors") entered into a modification agreement clarifying the width and location of the easement created under the Right of Way Agreement.

6. The Right of Way Agreement and the Modification Agreement (together, the "ROW Agreements") created a valid and enforceable Easement and right-of-way across the Property.

7. Columbia is the successor-in-interest to Commonwealth under the ROW Agreements and, therefore, possesses all the rights of Commonwealth under the ROW Agreements.

8. Grove Avenue is the successor-in-interest to the Original Grantors under the ROW Agreements with respect to the Property and, therefore, possesses all the rights of the Original Grantors under the ROW Agreements.

9. The Easement is 80 feet in width and runs parallel to Hillpoint Boulevard along the northern edge of the Property.

10. Pursuant to the ROW Agreements, Columbia operates and maintains two high pressure natural gas transmission pipelines known as Lines VM107 and VM108 (the "Pipelines").

11. VM107 was installed in or about 1950 and VM108 was installed in or about 1961.

12. Line VM107 is a twelve (12) inch in diameter high-pressure natural gas transmission pipeline.

13. Line VM108 is a sixteen (16) inch in diameter high-pressure natural gas transmission pipeline.

14. Line VM107 and Line VM108 were installed below cultivation on the Property and are within the width of the Easement.

15. The Pipelines are a substantial source for the delivery of natural gas to the Tidewater area of Virginia.

16. Columbia's daily revenue from the operation of the Pipelines exceeds \$45,000.00.

17. The segment of the Pipelines at issue in this case is a "high consequence area" as described by 49 CFR § 192.903.

18. Grove Avenue intends to engage in certain construction activities, including the construction of a twenty-six (26) foot wide paved asphalt roadway crossing over the Pipelines and the installation of a water line under the Pipelines (collectively, the "Construction Activities").⁴

⁴ Prior to trial, the parties disputed whether a water line desired by Grove and crossing under Columbia's Pipelines could be safely/lawfully installed

19. The Construction Activities are part of Grove Avenue's planned 17-unit housing development to be known as Addison Place Condominiums.

20. Based on the available data concerning the condition of the Pipelines, it is Columbia's contention that no work is currently required on the Pipelines absent the proposed construction of a road by Grove Avenue.

C. Facts Determined by the Court as Factfinder

1. Testing Protocol & Repairs

21. Columbia performs various testing procedures to monitor the integrity of its Pipelines, including aerial surveillance, ground surveillance, testing of the "cathodic protection system" designed to prevent the steel Pipelines from corroding, and "pig" surveys that inspect and test the Pipelines from the inside.

22. Columbia obtains the most detailed Pipeline integrity information through the use of a "smart pig," which is an in-line inspection tool that is run through the inside of the Pipelines every seven years to gather information on anomalies such as dents, cracks, wall loss from corrosion, and manufacturing defects.

without first excavating Columbia's Pipelines. Such issue was resolved by the parties after Grove learned that there is a cost-effective manner to "bore" the water line under the Pipelines using a method that comports with Columbia's requirements. Grove alternatively notes that the water-line dispute, even if not resolved, could be avoided entirely as Grove has a feasible, albeit more expensive, option of routing its water line to an adjacent property that would not involve crossing Columbia's Pipelines.

Columbia's Pipelines on the Property were last "pigged" in 2013 and 2014.

23. The Pipelines' "cathodic protection" system is tested at defined monitoring stations (none of which are located at the proposed crossing), and it can also be tested through a "close interval survey" where a corrosion technician walks along the pipeline and takes a soil reading every four to ten feet to ensure that the cathodic protection system is functioning properly. Such close interval testing could not be conducted on the twenty-six foot stretch of the Pipelines that would be covered by the asphalt crossing unless the technician first drilled through the asphalt.

24. The trial record indicates that Columbia complies with federal testing requirements by performing a close-interval test on each side of road crossings, and if testing under a road becomes necessary, a hole can be drilled through the asphalt. Columbia failed to demonstrate that such drilling procedure, in the unlikely event that it becomes necessary, is time consuming or expensive, with Columbia's expert acknowledging that the corrosion technicians have the capability to test the soil under an asphalt road by drilling any necessary holes.

25. The proposed twenty-six-foot-wide asphalt crossing would have virtually no impact on the majority of Columbia's testing procedures, as aerial surveillance, ground surveillance, cathodic testing at defined stations, and "pig" testing could all proceed

unimpacted; moreover, the minimal impact to the "close interval surveys" are just that, minimal.

26. Although Columbia presented some evidence regarding the risks of delayed leak detection and/or gas "migration" should a leak occur under the proposed road, Columbia's case-specific evidence regarding these risks was both limited and unconvincing.

27. Despite the fact that the two cathodically protected Pipelines have been in the ground for approximately 60-70 years, there has never been a need for Columbia to access, repair, or physically inspect the Pipelines on Grove's Property. Additionally, every test that Columbia has performed on this section of the Pipelines over the past several years, including the most recent "pig" surveys, revealed that the Pipelines are in good condition and do not require any repairs (although the "pig" data is approximately five years old).

28. Based on the testimony of Columbia's expert, Andrew Kvasnicka ("Mr. Kvasnicka"), if an "emergency" repair was necessary under the asphalt road proposed by Grove, it could take Columbia several hours longer to secure the necessary equipment and personnel than it would take to secure the same for excavation in an open field. Such delay is difficult to pinpoint as it would depend on various factors, but it could be approximately four hours. That said, in over twenty years in the industry, and having been involved in approximately sixty "digs" under asphalt roads,

Mr. Kvasnicka cannot recall a single "emergency" unscheduled dig under an asphalt road, meaning that the equipment and personnel have always been scheduled in advance.

29. Based on Mr. Kvasnicka's testimony, once the necessary equipment and personnel are on site, the roadway proposed by Grove would delay accessing the Pipelines by approximately four hours, as additional excavation work would be necessary to remove the asphalt roadway.⁵

30. Because the road crossing proposed by Grove will terminate in a dead-end that does not intersect with any other roads, Columbia will bear additional costs and delays caused by the need to keep one lane of the proposed road passable during a repair project in case emergency personnel and/or residents need to access Grove's proposed Condominium development.⁶

2. Wheel Load Calculations

31. If a road is constructed over Columbia's Pipelines, there is a risk to the integrity of the Pipelines based on the weight of crossing vehicular traffic. Such risk is evaluated through conducting "wheel-load" calculations.

⁵ For context, Columbia's expert testified that a scheduled "pig-dig" conducted to repair a known defect in an underground pipeline could take a "couple of days," or could take "a week," depending on the nature of the repair.

⁶ Columbia did not present evidence quantifying the additional cost, or the additional delay, resulting from the absence of an alternative access road.

32. Mr. Kvasnicka performed wheel-load calculations in this case using an industry-accepted software program, which conducts a mathematical calculation based on the "Spangler Analysis," named for the engineer that developed the protocol for performing such test. Mr. Kvasnicka concluded, based on his calculations using the industry-accepted program, that the crossing proposed by Grove was not safe as to either of Columbia's Pipelines.

33. Grove's expert, Dr. Richard Roby ("Dr. Roby"), performed wheel-load calculations using the same industry-accepted software program, but he concluded that the proposed crossing was safe as to both of Columbia's Pipelines.

34. While both experts used the same software/formula for performing wheel-load calculations, they input different variables into the equation, including different variables that reflect soil compaction and soil weight.

35. Even after filing a federal lawsuit, Columbia never tested the actual soil for compaction, soil type, or soil weight, but rather, Mr. Kvasnicka: (1) used the variable for soil compaction tied to the manner in which the Pipelines were actually installed ("open trench method"); (2) assumed, consistent with his training for permanent road construction, that the soil type was "granular materials without cohesion," the type most favorable to the developer (he makes an unfavorable assumption on this variable to evaluate a proposed temporary road across a grassy lot); and (3)

assumed a "worst-case scenario" for soil weight (130 lbs/ft³) justifying his decision to do so based on his training in the industry and a desire to be conservative in the absence of data to the contrary. Such latter "worse-case" assumption is not consistent with the "range" of soil weights in the software guidelines for the selected most-favorable soil type (90-100 lbs/ft³), but is arguably consistent with another statement within such guidelines indicating that Spangler recommends using the worst-case assumption for the friction co-efficient (soil type) in order to reflect conservatism unless there is actual evidence that a less conservative value is accurate.⁷

36. Even after being named in a federal lawsuit and advancing a counterclaim seeking a declaratory judgment intended to avoid hundreds of thousands of dollars in requested mitigation measures, Grove never tested the actual soil for compaction, soil type, or soil weight, nor did Grove hire a soil expert. Rather, Grove's

⁷ The width of the trench dug at the time the Pipelines were installed is another variable that Columbia's expert input into the wheel-load formula based on his training and experience. He testified that because he was obviously not present in the 1950s and 1960s when the Pipelines were installed, he could not know this variable with certainty. He further stated that a four-foot wide trench is common in the pipeline industry today, and that he has been trained to use that width in his calculations. Although it arguably remains unclear whether "four feet" would be widely accepted in the industry as an accurate estimate of historical installation practices, Grove's expert advanced nothing to undermine the reasonableness of such estimate. Rather, Dr. Roby merely speculated that the trench could have been narrower, and his testimony on this issue at least suggested his unfamiliarity with what this variable was meant to represent in the wheel-load calculations. Because Grove's challenge to Mr. Kvasnicka's assumption is speculative, the Court accepts his assumption as reasonable.

engineering expert, whose primary expertise is in combustion systems, fire protection engineering and safety analysis (both before and after incidents), concluded: (1) that it was appropriate to assume that the soil over and around the Pipelines was near 100% compaction due to the length of time it was presumably left undisturbed, causing him to input a variable for soil compaction into the software program ("bored method") that is inconsistent with the manner in which the Pipelines were actually installed; (2) that the soil type was granular materials without cohesion, the most favorable type of soil from the developer's perspective;⁸ and (3) that the soil weight was the "midline" weight within the typical range of weights associated with such best-case scenario soil type (95 lbs/ft³).

37. To further clarify Grove's position on the first data point, soil compaction, Dr. Roby essentially opined that although it is undisputed that Columbia's Pipelines were actually installed through an "open trench method," it was more scientifically accurate to select the "bored method" in the software program.

⁸ As previously noted, Columbia's expert similarly selected this "best-case scenario" type of soil in his calculation, testifying that he always used such assumption for evaluating permanent road crossings because it gives the best results and mimics a typical road subbase. When pressed on cross-examination, Mr. Kvasnicka appeared to admit that such soil type was consistent with his exposure to the soil in the same general area as Grove's Property as he has worked on prior excavations within a mile of Grove's proposed crossing. Even assuming, in Grove's favor, that such latter statement is accurate, the Court notes the obvious concern of relying on soil data from "within a mile" of the proposed crossing rather than data regarding the soil properties at the location of the proposed crossing.

Dr. Roby explained that this input variable is designed to reflect soil compaction, and that the passage of many years since the Pipelines were installed likely caused the soil to compact to a degree that approached that of undisturbed soil, as would exist if the "bored method" was used. Dr. Roby offered common sense examples of soil settling, such as after a fresh grave is dug in a cemetery, or after a new house is constructed, but he did not appear to rely on any specialized soil knowledge, pipeline industry knowledge, or construction industry knowledge. Such lack of expertise calls into question the reliability of his challenge to the industry-accepted software program, particularly because Dr. Roby never inspected the condition of the location at the proposed crossing.

38. Neither Dr. Roby's testimony, nor any other evidence advanced by Grove, suggested that any soil scientists, experts in the pipeline industry, or experts in the road construction industry, viewed the industry-accepted software program as flawed whenever it is used to calculate wheel-loads for pipelines that were installed several decades ago. Grove similarly failed to introduce evidence suggesting that any industry practitioners actually select a "bored" method while performing calculations when it is known that pipelines were installed through an "open trench" method. Although Dr. Roby testified Spangler recognized that the open trench method becomes more and more conservative as

time passes due to compaction, Spangler nevertheless instructed that one should use the correct input, but understand that doing so is conservative. Grove's expert further acknowledged in his testimony that conservatism was generally necessary to the formula's viability because safety concerns dictate that a close call should err on the side of "failure" rather than returning a "safe to cross" result when it might not be safe to cross.

39. Dr. Roby's testimony on the wheel-load analysis, including the soil compaction and other input variables, is best summarized as seeking to inject doubt into the validity of the software model itself, as he highlighted several additional variables (such as trench width and population density) that could be slightly modified in order to yield a "passing" score. While the Court acknowledges Dr. Roby's point, he did little, if anything, to demonstrate that Mr. Kvasnicka used the wrong variable for population density, trench width, or any of the other inputs, with the arguable exception of soil weight.

40. The most questionable variable input into the formula by Mr. Kvasnicka is the soil weight, as he assumed the soil weight for "saturated clay" (the heaviest type of soil) rather than the soil weight generally associated with the "granular materials without cohesion" soil type that he has been trained to input for all permanent road crossings. Assuming, without knowing, that the soil at the crossing site is "granular materials," if all other

input variables are left unchanged, but the soil weight is changed from the ultra-conservative amount used by Mr. Kvasnicka (130 lbs/ft³) to the highest amount within the "range" stated in the software guidelines for "granular materials," (100 lbs/ft³), Dr. Roby's calculations purportedly result in a "safe to cross" score for one Pipeline, and a "borderline" result for the other. As Dr. Roby did not explain what he meant by "borderline," when such word is taken in the context of his testimony, it is interpreted to mean a score that does not "pass," but is close to passing.⁹

41. Mr. Kvasnicka has evaluated over twenty proposed permanent road crossings, yet his wheel-load calculations utilizing the industry-accepted software program yielded an "unsafe to cross" conclusion for every single crossing that he evaluated. He has, however, had multiple temporary road crossings yield a "safe to cross" result.

42. Mr. Kvasnicka, a credible and forthright expert witness with an unwavering focus on safety, opined that even if it was

⁹ Dr. Roby separately testified that adding a few extra inches of "fill" material over the top of the Pipelines is a viable and cost-effective option that would improve the wheel-load results. Dr. Roby asserted that such procedure is a "common industry practice," but he is not an expert in the industry, and his conclusion appears to be based solely on a "Canadian study" that was not presented to Columbia's engineers prior to litigation. Moreover: (1) Grove never submitted a proposal to Columbia seeking to build its crossing using additional fill material such that Columbia's engineering department had an opportunity to evaluate the propriety of such proposal in these circumstances; and (2) Dr. Roby never used the wheel-load formula to determine if both Pipelines would pass if extra fill was added and the soil weight was changed from (130 lbs/ft³) to (100 lbs/ft³).

proven that the software input variables should be revised in this case, and even if such revisions resulted in a "safe to cross" result, in light of the age of the Pipelines at issue, and the fact that he believes in the accuracy of his initial calculations, he would likely still conclude that a visual inspection of the Pipelines is needed to ensure a safe crossing.¹⁰

43. If the Pipelines were recently installed, had been constructed using modern manufacturing techniques, and the industry-accepted formula returned a "safe to cross" result, Mr. Kvasnicka would conclude that there was no need for a visual inspection prior to approving a proposed asphalt road crossing.

44. Notwithstanding the fact that Columbia's Pipelines are roughly 60-70 years old and in a "high-consequence" area adjacent to a school, Columbia has no intention to visually inspect, repair, or replace the Pipelines unless a road crossing is constructed. Stated differently, Columbia fully accepts and trusts its various forms of testing data for all federal regulatory and maintenance purposes, yet its expert is apparently unwilling to trust such data when it comes to evaluating a proposed road crossing due to the age of the Pipelines and the age of the "pig" data.

¹⁰ Although not a "factual finding," the Court notes in advance of its legal analysis that it acknowledges and respects Mr. Kvasnicka's conservatism; however, the Court has strong reservations about Columbia's apparent viewpoint that it can demand that Grove pay for expensive mitigation measures if the need for such measures is predicated solely on a non-definable "hunch" that something could be wrong with the Pipelines due to their age.

Accordingly, even though the industry-accepted wheel-load formula already has a 38% margin of error built into it based on the population density of the area in question, Mr. Kvasnicka would likely err on the side of caution regardless of the result of the wheel-load analysis and conclude that a visual inspection is required before Grove's crossing will be allowed.¹¹

II. Conclusions of Law

A. Virginia Law on Easements

Virginia law applies to the instant diversity case, and because the easement at issue was "granted by deed, the ordinary rule which governs in the construction of other writings prevails, namely, that the rights of the parties must be ascertained from the words of the deed, and the extent of the easement cannot be determined from any other source." Gordon v. Hoy, 211 Va. 539, 541, 178 S.E.2d 495, 496 (1971). Only in circumstances where the terms of the written deed are found to be ambiguous should the Court seek to "ascertain the intention of the parties" through

¹¹ On the opposite end of the spectrum from Mr. Kvasnicka's conservatism is Dr. Roby's apparent lack of conservatism. Notably, Dr. Roby took the position at trial that a wheel-load calculation must only be "close" to passing, meaning that even in a densely populated area that requires a score of a 62 or lower to yield a passing score, Dr. Roby thought a score of 63.4 was sufficient from an engineering standpoint. Grove failed, however, to introduce any evidence from an expert in the gas pipeline industry that would suggest that close is "good enough," particularly when crossing two gas transmission pipelines that are over 50 years old and are located in a "high consequence area" adjacent to an elementary school. Dr. Roby's arguable separation from industry-specific concerns is further illustrated by the fact that he had not reviewed the federal regulations governing gas pipelines for at least five years prior to being retained in this case.

considering the language of the deed in "light of the circumstances surrounding the parties and the land at the time the deed was executed." Id.; see Columbia Gas Transmission, LLC v. Vlahos, 94 F. Supp. 3d 728, 738 (E.D. Va. 2015).

Turning to the relative rights of Columbia and Grove as the respective owners of the dominant and servient estates, the Supreme Court of Virginia has explained as follows:

Under well-settled principles, a conveyance of an easement that is non-exclusive does not strip the servient landowner of its right to all use of the land. Walton v. Capital Land, Inc., 252 Va. 324, 326, 477 S.E.2d 499, 501 (1996). The servient landowner retains the right to use its property in any manner that does not unreasonably interfere with the lawful dominant use. Id. The servient landowner's right to reasonably use the land includes the right to grant to others additional easements to use the same land so long as the additional uses are not unreasonably burdensome or inconsistent with the existing dominant uses of the easement. Preshlock v. Brenner, 234 Va. 407, 410, 362 S.E.2d 696, 698 (1987).

The party alleging such an unreasonably burdensome or inconsistent use has the burden of proving this allegation. Hayes v. Aquia Marina, Inc., 243 Va. 255, 259, 414 S.E.2d 820, 822 (1992).

Shenandoah Acres, Inc. v. D.M. Conner, Inc., 256 Va. 337, 342, 505 S.E.2d 369, 371 (1998) (emphasis added).

Here, although Grove has expressly retained the full use and enjoyment of the servient estate, Grove's rights remain "subject to" Columbia's right to maintain and operate its high-pressure gas transmission Pipelines within the easement. See Walton, 252 Va. at 326-27, 477 S.E.2d at 501 ("[T]he servient landowner retains

the right to use the land in ways not inconsistent with the uses granted in the easement.") (emphasis added) (citations omitted). Columbia, as owner of the dominant estate, has the "privilege to use the land [owned by Grove] in a particular manner and for a particular purpose," and such right "creates a burden on the servient tract and requires that [Grove] refrain from interfering with the privilege conferred for the benefit of [Columbia]." Brown v. Haley, 233 Va. 210, 216, 355 S.E.2d 563, 567-68 (1987). That said, consistent with easement treatises, Virginia case law recognizes that when the dominant estate holder's easement rights are not "specifically defined," the law will imply those rights "reasonably necessary for the enjoyment of the easement," but such implied rights are limited to those that will "'burden the servient estate as little as possible.'" Scott v. Karmy, 52 Va. Cir. 118, 124-25 (2000) (quoting 25 Am. Jur. 2d Easements and Licenses, § 83);¹² see Columbia Gas Transmission, LLC v. Ott, 984 F. Supp. 2d 508, 519 (E.D. Va. 2013) (finding that, based on Scott and other authorities, Virginia law requires that the servient estate be burdened as little as possible); City of Lynchburg v. Smith, 166 Va. 364, 369, 186 S.E. 51, 53 (1936) (citing case law for the

¹² Although it appears that the quoted language from American Jurisprudence does not, at least at this time, appear in the cited section, it can be found in other provisions. See 81 Am. Jur. Proof of Facts 3d 199 § 11 (Nov. 2018 update); 9 Am. Jur. Pl. & Pr. Forms Easements and Licenses § 54 (Sept. 2018 update).

proposition that although an easement holder must be allowed to enjoy "all the advantages contemplated by the grant," he must "use his own privileges as not to do any unnecessary injury to the grantee") (citation omitted); 28 A.L.R.2d 626 (explaining that the owner of a pipeline easement appears to have the authority to use the easement "in any way that is reasonable and proper to the enjoyment of the easement acquired, imposing in this respect as slight a burden as possible on the servient tenement"); see also Wessynton Homes Ass'n, Inc. v. Burke, 79 Va. Cir. 365, 369 (2009) ("Unless authorized by the terms of the servitude, the [easement] holder is not entitled to cause unreasonable damage to the servient estate or interfere unreasonably with its enjoyment." (quoting Restatement (Third) of Property - Servitudes § 4.10(c) (Oct. 2018 update))).

Columbia maintains publicly available written policies and guidelines that are intended to relay Columbia's rules and procedures regarding various potential encroachments, including road crossings and vegetation, and such policies generally allow perpendicular road crossings constructed of asphalt.¹³ Tr. Exs.

¹³ It is undisputed that Columbia has allowed multiple asphalt roads to cross its Pipelines within a mile of Grove's property, but that it did so after the property owners agreed to pay for the mitigation measures that Columbia requests in this case. Although the existence of other crossings does not preclude Columbia from enjoining the crossing proposed by Grove, particularly because Grove refuses to finance the requested mitigation measures, the existence of multiple asphalt crossings in close proximity to Grove's Property lends context when considering whether the proposed asphalt crossing is "inconsistent with the existing dominant uses of the easement."

9-10. However, Columbia's written policies note that all crossings must be evaluated and approved by Columbia in advance of construction, that mitigation measures may be necessary, and that an entity constructing a road crossing "must pay for any measures required by [Columbia] to inspect and protect its pipeline(s)." Trial Ex. 9, at 2. Such written procedures also require Columbia's approval before the depth of cover over its pipelines can be modified. Id. Such policies do not state, or even suggest, that Columbia routinely requires hundreds of thousands of dollars in mitigation measures prior to approving a single two-lane asphalt road crossing.

Neither this Court, nor Grove, questions the fact that Columbia has both the right and the duty to monitor construction activities, excavation activities, and other potentially dangerous activities within its pipeline easements. It is similarly unremarkable that, absent an express statement to the contrary in a written easement, Columbia has the legal right to enjoin activities that pose a material risk to its Pipelines. Moreover, when considering the concept of "materiality," it should be noted that the Pipelines at issue are high-pressure gas transmission lines, which are distinguishable from distribution lines that generally transmit smaller quantities of gas at a much lower

Shenandoah Acres, 256 Va. at 342, 505 S.E.2d at 371.

pressure. Even in the context of transmission lines, however, the Court agrees with Grove's position that the potential for a pipeline incident to cause catastrophic harm is alone insufficient to render the appropriate panacea an injunction preventing all development/improvements irrespective of the scientific evidence documenting the risk, or lack thereof, to the Pipelines.

Accordingly, in a word, this case comes down to "reasonableness," as the undisputed facts demonstrate that Grove's proposed asphalt road creates at least some additional burden on Columbia, as it will have a very minor impact on Columbia's routine testing procedures, and will increase the time/cost to access the Pipelines in the unlikely event that the exceedingly small stretch of Pipelines to be crossed by the proposed road (twenty-six feet) needs to be physically accessed by Columbia. See 28 A.L.R.2d 626 ("One of the outstanding incidents to full enjoyment of a pipeline easement is that it be accessible for maintenance and repair. Without such right the easement would eventually become useless, since leaks, breaks, and other defects would cause loss of the material transported."); 61 Am. Jur. 2d Pipelines § 39 (Nov. 2018 update) ("The erection of substantial structures or other obstructions on or over a pipeline right-of-way constitutes an unwarranted interference with the rights of the dominant owner, who may require the removal or enjoin the erection or maintenance of such obstructions. Mere inconvenience to the pipeline owner and

his or her right of access for maintenance and repair is not of itself sufficient to entitle the pipeline owner to the removal of a permanent obstruction, such as a building, over the right-of-way.") (emphasis added); Jon W. Bruce & James W. Ely, Jr., The Law of Easements & Licenses in Land § 8:21 (Sept. 2018 update) ("Whether a particular activity by the servient owner constitutes an unreasonable interference is a question of fact, and uniform rules are difficult to formulate.").

B. Breadth of the Case-Specific Easement

A survey of relevant caselaw reveals that written pipeline easements may expressly reference the servient landowner's right to maintain roads or other obstructions, or in contrast, may expressly forbid listed obstructions, such as buildings, structures, or trees. Compare N. Utilities, Inc. v. City of S. Portland, 536 A.2d 1116, 1117 n.1 (Me. 1988) (allowing the grantor to "build cross fences, to maintain and use roads, driveways, sewers, drains, waterlines, gas lines, telephone and telegraph lines and electric light and power lines across said easement, subject, however, to the conditions that . . . rights reserved to the Grantor shall not be used or exercised in any manner which will interfere with the rights, privileges and authority herein granted to the Grantee"), with Ott, 984 F. Supp. 2d at 513 (quoting from a written pipeline easement executed in 1950 indicating that "no buildings or structures of any nature be erected within" the

easement), and Mid-Am. Pipeline Co. v. Wietharn, 246 Kan. 238, 239, 787 P.2d 716, 718 (1990) (discussing an easement granting the pipeline company the express authority to "keep clear all trees, undergrowth and other obstructions from the . . . granted right of way" with the landowner further agreeing "not to build, construct or create . . . any buildings or other structures on the . . . right of way that will interfere with the normal operation and maintenance of the said line or lines").

However, here, as appears to commonly be the case, the language of the easement, while clear and unambiguous, does not expressly address above-ground structures, fences, or crossings, thus requiring the Court to determine whether the disputed encroachment (a two lane asphalt road) falls within Grove's right as landowner to "fully use and enjoy the premises," or whether Grove should be legally barred from constructing the proposed road crossing because it unreasonably interferes with Columbia's right to "maintain and operate" its underground Pipelines. Such determination is case-specific, fact intensive, and as previously suggested herein, turns on the concepts of "materiality" and "reasonableness."

Should the Court find that the proposed crossing will materially interfere with Columbia's easement rights such that the road cannot be constructed without Columbia's Pipelines being relocated, buried deeper, encased, or otherwise protected through

mitigation measures to avoid damage from vehicular traffic, numerous federal and state authorities establish that the cost of the required mitigation measures must be borne by Grove. See Panhandle E. Pipe Line Co. v. State Highway Comm'n of Kansas, 294 U.S. 613, 616-19 (1935) (holding that a state agency facilitating highway construction could not constitutionally order a utility company to make changes to its natural gas lines, such as "lowerings" or "casements," without providing compensation); Buckeye Pipe Line Co. v. Keating, 229 F.2d 795, 796-98 (7th Cir. 1956) (affirming the district court's order enjoining the defendant developers from crossing a one-foot deep oil pipeline with a paved road (or allowing traffic to pass over the pipeline on an unpaved road) unless and until the defendants "incased and lowered" the pipe, or agreed to pay \$2,900 to cover such costs, in a case where the record demonstrated that "injury to the pipe would be a probable result of paving and using the streets while the pipe is unprotected"); Tenneco Inc. v. May, 377 F. Supp. 941, 942-44 (E.D. Ky. 1974), aff'd, 512 F.2d 1380 (6th Cir. 1975) (holding that the "road construction and concomitant necessity of encasing the pipeline constituted an unreasonable interference with the dominant estate," thus requiring the servient estate holder to bear the costs of encasement in an action where live testimony "left scant doubt as to the necessity of securing the pipeline against the increased hazards attendant to highway traffic");

Minard Run Oil Co. v. Pennzoil Co., 419 Pa. 334, 335-36, 214 A.2d 234, 235 (1965) (holding, in a case where "the nature of the terrain" required a pipeline to be lowered before a new road crossing was constructed, that it was "the plaintiff who desires to alter the status quo for its benefits (even though, by deepening the bed of the defendants' pipeline it will be less subject to damage)" and it therefore must be "the plaintiff's obligation to pay for the achievement of its desire").¹⁴ Grove does not dispute such legal authority, but instead asserts that this case is factually distinguishable—that is, Grove asserts that there is no reliable scientific evidence establishing that expensive mitigation procedures are necessary in order for Grove to construct a safe crossing.

C. Case-specific Interference

1. General Allegations & Applicable Law

Columbia has the burden to demonstrate that Grove's planned activities will "unreasonably" interfere with Columbia's use and enjoyment of its easement. Shenandoah Acres, 256 Va. at 342, 505 S.E.2d at 371. Columbia advances two primary arguments to demonstrate unreasonable interference: (1) the proposed road

¹⁴ Historic case law frequently references "encasing" a pipeline for added protection from vehicular weight, a practice that involves installing a second larger pipe around the existing pipeline. However, Columbia's expert explained at trial that such mitigation procedure often caused corrosion that would not otherwise occur, and that encasing is therefore no longer a favored practice.

crossing unreasonably increases the risk of damage to the Pipelines, thus enhancing the danger to the public, due to the weight of crossing vehicular traffic; and (2) the asphalt road, by its nature, creates a material encumbrance that Columbia can prohibit as of right (although it does not seek to do so) because such road, if constructed, will adversely impact Columbia's testing protocol and will delay Columbia's ability to physically access its Pipelines by several hours.¹⁵

The critical question in this case is not whether an asphalt crossing, in the abstract, unreasonably interferes with Columbia's safe operation, testing, maintenance, and repair activities, but rather, whether this specific road, in this specific place, built in the specific manner proposed by Grove, would constitute an "unreasonable" interference. See McCarthy Holdings LLC v. Burgher, 282 Va. 267, 273, 716 S.E.2d 461, 464 (2011) ("Ordinarily, when a tract of land is subjected to an easement, the servient owner may make any use of the land that does not unreasonably interfere with the use and enjoyment of the easement." (quoting Preshlock, 234 Va. at 410, 362 S.E.2d at 698)). The answer to such question necessarily turns on the materiality of the obstruction, to include consideration of whether it is temporary

¹⁵ Columbia divides its argument on this latter issue into two discrete arguments (testing interference and access interference), but this Court elects to treat such concepts collectively.

or permanent, the degree to which it burdens Columbia's rights, as well as the cost and time to remove such an obstruction should the need arise. See Restatement (Third) of Property - Servitudes § 4.9 (discussing the importance of the "character of the improvement" and noting that "the more difficult its removal is likely to be" the greater the likelihood that it constitutes an "unreasonable interference"). The Court therefore does not endeavor to resolve whether Columbia has the right to categorically prohibit the construction of all road crossings, considering instead whether the specific crossing proposed by Grove, constructed without the mitigation measures sought by Columbia, would constitute an unreasonable interference with Columbia's right to operate and maintain its Pipelines.

In addressing such issue, it is tempting for this Court, as factfinder, to place substantial emphasis on the existence of other asphalt crossings in the immediate area of the proposed crossing and/or on modern pipeline companies' obvious ability to test, maintain and operate their pipelines even when they cross under concrete multi-lane highways, or rivers, or shipyards; however, the Court's focus must remain narrow. Here, the predecessor landowner and predecessor pipeline company divided the "bundle of sticks" attendant to land ownership regarding this specific parcel of land. A price was set and paid, and Columbia obtained the legal right to access, monitor, test, and maintain its pipeline(s) on

this specific tract of land. The critical determination must therefore be based on the case-specific bargained-for rights regarding this specific parcel, and turns on the resolution of the following two questions: (1) Has Columbia sufficiently demonstrated that the case-specific data establishes that Grove's proposed crossing, constructed without mitigation procedures, introduces a sufficient risk of harm to the integrity of the Pipelines such that it constitutes an unreasonable interference, either when vehicular weight is considered alone, or considered in conjunction with the evidence demonstrating that the road will delay Columbia's ability to access its Pipelines?; and (2) If vehicular weight does not present a safety concern, does Columbia nevertheless have the authority to prohibit the construction of the proposed two-lane asphalt crossing predicated solely on the impact such crossing will have on Columbia's testing procedures and/or the increase in time or cost to repair the Pipelines at the location of the crossing? Because the Court finds in favor of Columbia on the first question, the Court does not squarely resolve the second question.

2. Risk to Pipeline Integrity from Traffic

The difficult pipeline "safety" question, that could not be resolved without the benefit of live testimony from the parties' respective experts, is whether the case-specific scientific evidence supports Columbia's contention that mitigation measures

designed to protect the Pipelines are needed before a safe road crossing can be constructed. The Court's factual findings, set forth in detail above, reflect the Court's concerns regarding the reliability of portions of the expert testimony advanced by both parties in this case. However, the Court finds that Mr. Kvasnicka, Columbia's expert who has worked in the pipeline industry for many years, provided the more compelling testimony. Grove's expert, Dr. Roby, while both a qualified engineer and credible witness, is not a soil expert, expert in road construction, or expert that specializes in the pipeline industry.¹⁶

a. Pipeline Installation Method

One of the key disputes between the experts was whether the "construction type" variable in the wheel-load formula, a variable relevant to the "bedding constants" of Columbia's buried Pipelines, should be input as "open trench" or as "bored." It is undisputed that the Pipelines were actually installed through an "open trench method," but Dr. Roby advocated inputting the "bored method" into the formula to reflect the presumed actual condition of the soil after many years of settling. Although Dr. Roby has experience investigating fires and damage caused by pipeline

¹⁶ At trial, the Court overruled Columbia's objection to Dr. Roby being accepted as an expert in "pipeline safety requirements," finding that he had sufficient training and experience to opine on such subject. However, the Court expressly noted that "the weight" that the Court would ultimately give to Dr. Roby's testimony on such subject would be based on the depth of his knowledge and experience on such matters.

explosions/failures, he does not appear to have scientific experience regarding soil properties, and instead appeared to rely largely on the "common sense" concept that soil settles/compacts over time. Although this Court does not dispute that common experience renders soil "settling" a familiar concept, Dr. Roby's testimony was insufficient to convince the Court that the soil at the proposed crossing location "settled" to such a degree that the more accurate input variable was the variable reflecting the installation type that was not used in this case. Stated a little differently, even if Dr. Roby is in fact correct, absent evidence from an individual more familiar with the pipeline industry, the wheel-load software program, soil sciences, or even the broader underground utility industry, the Court is not prepared to disregard the industry-accepted formula. Notably, the purported "flaw" in such formula is not case-specific, but would presumably exist every time it was applied to a pipeline that had been buried for many years. Again, while this Court does not discount the possibility that such analytical "flaw" could exist, Grove's trial evidence is insufficient to support such finding at this time.¹⁷

¹⁷ This Court holds Columbia to its burden to demonstrate unreasonable interference, but to the extent Grove seeks to undercut Columbia's scientific calculations based on a known data point, or a facially reasonable assumption applied by Columbia's expert that is supported by credible testimony, it is incumbent on Grove to demonstrate the flaws in Columbia's evidence.

The Court separately notes that Dr. Roby's soil compaction testimony also relied on the assumption that the soil at the location of the crossing had been undisturbed for several decades, which was supported, at least generally, by the testimony of the Property owner. Dr. Roby, however, did not visit the Property to inspect the current state of the soil at the location of the proposed crossing (as opposed to the Property generally), did not perform any soil compaction tests, and did not rely on any soil test data performed by any other expert or qualified individual. Had Grove conducted such testing and used the actual soil conditions to undercut the reliability of Columbia's wheel-load calculations, this Court's conclusion regarding "unreasonable interference" may have been starkly different.

b. Soil Type, Soil Weight, Trench Width

Dr. Roby's wheel-load analysis adopts the assumption made by Mr. Kvasnicka that was favorable to Grove (soil type) but sought to attack the assumptions that were unfavorable to Grove (soil weight, trench width). In doing so, Dr. Roby did not rely on any factual information regarding the actual soil conditions or the width of the trench used to install Columbia's Pipelines, but rather, he appeared to highlight reasons why one should assume that the actual weight was less, and why one could assume that the actual trench width, dug many decades ago, might have been narrower

than four feet.¹⁸ Similarly, although not included in Grove's plans documenting the proposed road crossing, Dr. Roby discussed the favorable impact of adding additional fill material on top of the Pipelines, something he characterized as "standard practice" in the industry. However, as discussed herein, Dr. Roby is not truly an industry practitioner, and his conclusion appears to rely solely on recounting the conclusions of a Canadian study on pipeline crossings. Even if such study had been admitted into evidence and deemed reliable, it both acknowledges the benefits of adding additional fill to reduce the impact of vehicle weight on the pipelines, and the added risk of increasing stress on buried pipelines due to the weight from the added fill. Further assuming that the benefits outweigh the drawbacks, Grove never proposed such option to Columbia as part of its crossing plan, and thus, Columbia's engineers never evaluated the possibility of adding fill as part of the engineering review of the proposed crossing.

Forced to make a call on this close issue, the Court finds that, after weighing the case-specific evidence, Mr. Kvasnicka's

¹⁸ As to trench width, Dr. Roby testified about a personal experience when he witnessed a far narrower trench dug at his golf club; however, his testimony did nothing to suggest that transmission pipeline installation trenches dug in the 1950s and 1960s were in fact narrower than the four-foot standard industry width assumed by Mr. Kvasnicka. Rather, Dr. Roby's testimony appears to be best characterized as highlighting the degree to which such variable would impact the wheel-load calculations if the trench had been narrower. The fact that small changes in various inputs into the formula can have a big impact on the program output is not lost on the Court; however, such fact is insufficient to call into question the reasonableness of the assumptions relied on by Columbia's expert.

testimony regarding the various wheel-load input variables was more compelling than Dr. Roby's testimony. Mr. Kvasnicka's calculation relied on the soil type most favorable to Grove, yet such favorable assumption was counterbalanced by an extremely conservative assumption regarding soil weight. Mr. Kvasnicka explained that he was taught by his mentor that, in the absence of having real data from soil scientists, it was appropriate to assume a soil weight of 130 lbs/ft³ in order to be conservative. Although Grove's expert proposed a different assumption, his field of expertise is not soil sciences, pipeline safety, or road construction. Accordingly, although Grove's trial evidence successfully demonstrated that Mr. Kvasnicka's analysis was predicated on a very conservative assumption regarding soil weight, Grove failed to convince the Court, in the context of a proposed road crossing over two separate decades' old high-pressure gas transmission lines located in a "high consequence area," that in the absence of actual soil data, Mr. Kvasnicka's conservative assumption was improper (particularly when made in conjunction with a favorable assumption for soil type). Alternatively, even if the Court assumes that Mr. Kvasnicka's soil weight assumption of 130 lbs/ft³ is unacceptably conservative, and that the highest allowable conservative assumption was instead 100

lbs/ft³, Dr. Roby's testimony was that one of Columbia's Pipelines still would not have resulted in a "safe to cross" result.¹⁹

In balancing the evidence regarding the experts' disputed assumptions, the Court acknowledges the fact that Mr. Kvasnicka has previously concluded that each one of the approximately twenty proposed permanent crossings that he has evaluated was deemed "unsafe to cross" without mitigation measures—a fact that causes pause regarding his approach. However, such reasonable basis for pause does not undermine the validity of Mr. Kvasnicka's assumptions absent evidence suggesting: (1) that one or more of such prior crossings was in fact "safe to cross" without mitigation procedures; or (2) that Mr. Kvasnicka's input variables were more conservative than is accepted in the industry.²⁰ Notably, Mr.

¹⁹ Because it is not even "known" that the proposed crossing location is in fact such favorable soil type (rather than a less favorable type, such as "topsoil" or "clay"), it would be eminently reasonable, based on the trial evidence presented in this case, to use a "conservative" estimate of 100 lbs/ft³ in the absence of actual soil data because such figure is consistent with the estimated "range" of soil weights in the software guidelines (90-100 lbs/ft³) for such favorable soil type.

²⁰ Engaging in speculation about unknown prior crossings is dangerous, because such prior crossings could have had far shallower pipelines, or any one of a number of other factors that dictated the result of the wheel-load calculations. The Court similarly places limited weight on Dr. Roby's contention that a "Canadian study" documenting rare instances of vehicular weight damaging buried pipelines empirically establishes that roads do not pose a significant risk to underground pipelines. Notably, it is not only possible, but probable, that road crossings rarely result in damage to buried gas transmission pipelines because industry practitioners like Mr. Kvasnicka work to ensure that permanent road crossings are not constructed: (1) over damaged or weakened pipelines; and/or (2) in a manner that risks a catastrophic explosion or other danger to the community. Stated differently, it is relatively unremarkable to suggest that vehicular weight rarely causes gas pipeline failure in an industry highly regulated by the federal government in which every effort is made to ensure that vehicular

Kvasnicka relied on his "training and experience" in the relevant field, which includes experience at a pipeline regulatory agency, and he freely admitted that, based on the risks involved, he errs on the side of conservatism. Without more compelling contrary evidence from an expert in the relevant field(s), this Court is not convinced that Mr. Kvasnicka's conservative assumptions were unwarranted, inaccurate, and/or unduly conservative.

In ruling in Columbia's favor on this issue, the Court notes that Mr. Kvasnicka appropriately considered, as one data point, the fact that the Pipelines in question have not been physically inspected in approximately 60 to 70 years, and that although Columbia's testing measures (including "pig" data) are accepted as reliable in the industry, they do not eliminate as a variable the possibility that the Pipelines are in a degraded state (meaning that they may be more susceptible than a newly manufactured pipeline would be to the danger from vehicular weight) particularly when the most recent "pig" data is approximately five years old. That said, had the trial evidence established that the Pipelines were "safe to cross" based on the actual soil conditions and/or proof of appropriate assumptions, all other things being equal, the Court would not likely have accepted Mr. Kvasnicka's position

weight does not cause pipeline failure.

that mitigation measures costing hundreds of thousands of dollars are necessary.

Having largely accepted Columbia's evidence regarding the added risk of vehicular weight, the Court must consider whether such added risk constitutes an "unreasonable interference." In addressing such question, the Court need not compartmentalize the alleged impacts from the proposed crossing, which most notably include the increased risk of damage due to vehicular weight and the delay and cost involved in excavating the proposed "dead-end" asphalt road. To the contrary, the impacts proven by Columbia will collectively result from Grove's proposed crossing, and it is therefore appropriate to consider these matters collectively in determining whether Columbia has demonstrated that the proposed crossing, constructed without excavation and the installation of flowable fill to protect the Pipelines from vehicular weight, will create a material encroachment that unreasonably interferes with Columbia's easement rights. Considering the wheel-load risk, combined with the unrefuted evidence establishing that the asphalt road will cause both an added delay, and added expense, to any repairs (with such delay and expense exacerbated by the fact that the dead-end crossing is the only manner of ingress/egress to the proposed development), the Court concludes that Columbia has demonstrated that the proposed crossing is an "unreasonable interference." Critically, Grove's current crossing plan not only

asks Columbia to shoulder an unreasonable risk to the integrity of its Pipelines from vehicular weight, but seeks to place Columbia in a position that delays Columbia's ability to access its Pipelines should future damage occur. Such delay could include a delay of several hours to secure necessary equipment in the rare event of an emergency dig, and would include a delay (also measured in hours) caused by the need to remove the asphalt road and a delay caused by the absence of any alternative access routes.

Consistent with prior cases where pipeline lowering or "encasement" was deemed necessary, the resolution of disputed facts at trial reveals that mitigation measures are necessary in this case. Because Grove refused to finance such mitigation measures, and because the crossing, as proposed, would cause irreparable harm to Columbia's right to safely maintain its Pipelines, the Court grants Columbia's request for an injunction precluding Grove from constructing a road crossing without first paying for, at a minimum, excavation and installation of flowable fill in order to mitigate and/or eliminate the risk to the Pipelines due to the increased burden of vehicular weight.²¹

²¹ The Court does not separately address the propriety of Columbia's related demand that Grove also pay for the "stripping" of the coating from the excavated Pipelines (and subsequent recoating) in order to permit a visual inspection of the Pipelines' integrity. Although the age of the Pipelines appears to be a relevant consideration in determining the likelihood that vehicular traffic may pose a danger to the integrity of such Pipelines, it remains unclear from the record before the Court whether Grove should be financially responsible for Columbia's desire to perform a visual inspection of its own decades' old transmission lines in a case where every non-

3. Comment on Testing/Repairs

Because this Court finds that Columbia has carried its burden to demonstrate that the case-specific proposed crossing constitutes an "unreasonable" interference when both wheel-loads and access delays are considered in tandem, the Court need not squarely address the parties' dispute regarding whether the asphalt crossing (irrespective of wheel-load calculations) itself constitutes an unreasonable interference. While this Court's comments on such issue are therefore dicta, they are presented for the purpose of transparency in light of the fact that these specific parties may continue to dispute such issue in further negotiations, and because there appears to be limited precedent addressing the "reasonableness" of access delays caused by asphalt road crossings.²²

invasive objective test that Columbia has performed has revealed that the Pipelines are in good condition (or at a minimum, were in good condition five years ago when they were last "pigged"). Stated differently, to the extent that excavating the Pipelines and installing flowable fill eliminates nearly every question mark regarding the threat of additional weight from vehicular traffic because such fill will provide 100% compaction and effectively distribute vehicular weight in a manner that can be scientifically proven to not introduce unacceptable stress on the Pipelines, there may not be a valid legal justification for Columbia to shift the burden to a developer to finance stripping the coating, and later recoating, the section of Pipelines at issue in order to allow Columbia to visually inspect its own decades' old lines. Such more nuanced question (whether the flowable fill sufficiently counteracts the risk introduced by the developer so as to reasonably approach the status quo) was not squarely before the Court because Grove's proposed crossing involved no excavation of any kind (other than the minimal excavation needed to safely "bore" the water-line under the transmission Pipelines).

²² Cf. Mid-Am. Pipeline Co. v. Lario Enterprises, Inc., 942 F.2d 1519, 1527 (10th Cir. 1991) (finding that multiple asphalt racetracks, which were as

Here, the undisputed evidence demonstrates that Grove's proposed crossing would render Columbia's right of way minimally less convenient because it impacts Columbia's ability to conduct "close interval surveys" and would prevent Columbia from accessing its Pipelines without first removing a portion of the asphalt road. At the risk of stating the obvious, the trial evidence established that it is more costly and time consuming to excavate an asphalt road than to excavate an open field, particularly if such road is the sole means of access to a residential development.²³ All that said, there was no evidence suggesting any likelihood that a repair

wide as 60 feet, and involved increasing the "cover" over the pipelines to as deep as 20 feet (the pipelines were originally 3 to 4 feet deep), "materially interfere[d]" with the operation of the pipelines, but finding that chain link fences and concrete barriers weighing 8,000 pounds each did not unreasonably interfere as they were "readily movable"); Enbridge Pipelines (Ozark), LLC v. Bailey, No. 09-CV-117-TCK-PJC, 2009 WL 2175587, at *4 (N.D. Okla. July 14, 2009) (granting a preliminary injunction ordering the removal of 10-15 feet of excess fill material, noting that such fill both prevented adequate monitoring and delayed access to a section of the pipeline with identifiable past integrity issues, but declining to order the removal of 1-2 feet of excess fill located over a different section of the pipelines); Columbia Gas Transmission, LLC v. Haas, -- F. Supp. 3d --, No. CV TDC-17-1147, 2018 WL 4387562, at *8 (D. Md. Sept. 14, 2018) (concluding, at the summary judgment stage, that Columbia failed to establish that a tree within the pipeline easement "would impose an unreasonable burden on Columbia Gas's ability to operate and maintain the pipeline," in a case where the defendant's evidence indicated that such tree could cause an approximately one to eight hour delay to emergency pipeline repairs); Texas E. Transmission LP. v. Bowers, 65 F. App'x 791, 795 (3d Cir. 2003) (affirming the "district court's determination that the additional ten hours (at the outside) to repair the pipeline [as a result of a tree's presence] is only a 'minimal burden' and that the continued presence of the Tree will not significantly interfere with emergency repair of the pipeline").

²³ In light of the fact that Grove's proposed crossing is immediately adjacent to an existing paved road, the Court seriously questions Dr. Roby's suggestion that the proposed crossing would improve Columbia's ability to rapidly transport the excavation equipment needed to access its Pipelines.

will become necessary on the small section of Pipelines (26 feet) that Grove proposes to cover with an asphalt road, and in fact, there is contrary evidence suggesting that the Pipelines in question are in good condition with no known wall thinning, corrosion, or other defects.

In support of its contention that the road, by its nature, is an unreasonable interference, Columbia maintains that Virginia case law evidences a "strict" concept of interference, as reflected in cases involving easements for ingress and egress. See, e.g., Willing v. Booker, 160 Va. 461, 465-66, 168 S.E. 417, 418 (1933) (discussing Virginia case law holding that "carts, sleds, and other chattels," and in some circumstances fences and gates, located within a right of way are improper because they either encroach upon its defined width or make the way "less convenient and beneficial than before") (citations omitted). This Court, however, notes that while Virginia cases involving obstructions in an easement of defined width for the purpose of ingress and egress are instructive, it appears that an analytical difference is present with an underground pipeline easement. Notably, in an ingress/egress case, the dominant land-owner has first and foremost contracted for free and unobstructed above-ground use of a defined width of land, and thus, buildings, fences, mulch piles, and other obstructions that narrow such an easement may be viewed as a "per se" unreasonable encumbrance. In contrast, the easement

at issue in this case, first and foremost, conveys the rights necessary to maintain an underground utility line, and expressly reserves to the servient estate holder the right to fully use and enjoy the surface, as long as such use does not unreasonably interfere with the dominant estate holder's rights. While Columbia must retain reasonable access to the width of the easement for the purpose of accessing and maintaining its Pipelines, unlike an ingress/egress easement, it is highly doubtful that a small "mulch pile" located on Columbia's easement would constitute a "material" encroachment amounting to an unreasonable interference.

Such concept was recently recognized by the Supreme Court of Virginia in a case where the roles were reversed, as it was the servient estate holder that wanted to maintain underground "encumbrances" beneath a right of way that guaranteed the dominant estate holder use of the surface for vehicular ingress/egress. In addressing the dispute as to whether the underground encumbrances were "per se" unreasonable because the easement was of a defined width, the Supreme Court of Virginia explained as follows:

[Virginia case law] establish[es] that a servient landowner may not effectively narrow the defined width of an easement by placing obstructions amounting to a material encroachment on the dominant owner's rights, even when the encroachment does not interfere with ingress and egress at that time. . . . In [the Plaintiffs'] view, every encroachment, no matter how minor, is material when the easement is of an express width. We do not agree. Our cases make clear that the owner of a servient estate may still make reasonable use of land burdened by an easement of defined width. An

encroachment that does not narrow the width of an easement or unreasonably interfere with its use is not a material encroachment.

Piney Meeting House Investments, Inc. v. Hart, 284 Va. 187, 194, 726 S.E.2d 319, 323 (2012) (internal quotation marks and citations omitted).

This Court fully acknowledges that Columbia's ability to maintain its underground Pipelines necessarily requires various restrictions on above-ground uses, likely including a prohibition on adding fifteen feet of excess fill, growing large trees with deep roots directly over the Pipelines, or building a house, barn, or other permanent enclosed structures.²⁴ However, whether a two-lane perpendicular asphalt road covering only twenty-six feet of Columbia's Pipelines is a sufficiently material encumbrance to render Columbia's easement "less useful or less convenient" is not subject to a "per se" analysis, but rather, is a question for the factfinder at trial, and "the test is reasonableness." Id. (internal quotation marks and citations omitted).

²⁴ The Court recognizes the cases, from within Virginia and from other jurisdictions, concluding that trees and other large vegetation can materially obstruct a pipeline company's ability to conduct aerial surveillance seeking to detect leaks and/or surveillance to ensure that the right of way is not being used by landowners in a manner that could compromise the integrity of the pipelines. Moreover, in certain scenarios, tree roots may pose a danger to the integrity of the pipelines and permanent enclosed structures within the easement may introduce the risk of gas buildup leading to a deadly explosion. These issues, however, are factually distinguishable from the two-lane perpendicular asphalt crossing at issue in this case.

Having carefully listened to the trial testimony, the Court continues to doubt whether Columbia established that the exceedingly minor impact on "close interval" cathodic testing, or minimal delays to hypothetical repairs, constitute "unreasonable interference," assuming, of course, that the evidence otherwise establishes that a crossing was "safe" based on wheel-load calculations. As summarized above, the case-specific facts demonstrated that: (1) the proposed road would have a de minimis, if any, impact on aerial surveillance, "pig" testing, or cathodic testing at defined stations, and that the impact on the "close interval" cathodic testing is very minor; (2) there is no history of damage or deterioration, and there has been no other reason to access the Pipeline segments in question over the last six to seven decades, with all of Columbia's available data from various testing methods indicating that the Pipelines are presently in good condition; (3) while the age of the Pipelines is a relevant consideration, it is not a significant enough factor for Columbia to deem it necessary to excavate and visually inspect the integrity of its Pipelines even though they are immediately adjacent to an elementary school and in a "high consequence area"—rather, for all intents and purposes, Columbia trusts, and expects the public to trust, the accuracy and reliability of its existing test results; (4) the proposed asphalt crossing could delay a scheduled repair by approximately four hours and an emergency unscheduled repair by

an additional four hours, although Columbia's expert has never participated in the latter; (5) in the event of a repair, gas is generally kept flowing unless there is a leak or another reason to believe that there is an unacceptable risk;²⁵ (6) Columbia has a proven track record of maintaining its Pipelines under asphalt crossings; and (7) in light of the nature of the proposed crossing, its proximity to a large metropolitan area, and other relevant facts, the equipment necessary to excavate Grove's proposed asphalt road is reasonably available. In sum, the Court does not formally decide whether the impact on testing/access is alone sufficient to constitute "unreasonable interference," but notes that the case-specific evidence raises substantial questions as to whether Columbia could carry its burden to establish such degree of interference.

4. Conclusion/Summary of Findings

Having found that Grove's proposed crossing, if constructed without mitigation measures, would constitute a material encumbrance that unreasonably interferes with Columbia's lawful right to safely maintain and repair its Pipelines (thus rendering Columbia's easement less useful and less convenient), the Court finds that an injunction is warranted in this case. See Snead v.

²⁵ Even if the gas needs to be shut off for the entire dig, there was no evidence presented at trial reflecting whether digs are conducted "around the clock," or whether the work schedule can simply be extended on the first day by the additional time necessary to remove the asphalt road.

C & S Properties Holding Co., 279 Va. 607, 616, 692 S.E.2d 212, 216 (2010); Pizzarelle v. Dempsey, 259 Va. 521, 530-32, 526 S.E.2d 260, 265-66 (2000). To the extent that further analysis on the propriety of an injunction is necessary, Columbia has effectively demonstrated that the crossing, if constructed without mitigation measures, would cause irreparable harm in the form of a material encroachment that threatens physical harm to the Pipelines, risks the public safety, and compromises not only Columbia's ability to repair the damage caused by vehicular traffic, but also compromises its ability to safely transmit an uninterrupted supply of natural gas to the Tidewater region. See Shenandoah Acres, 256 Va. at 342, 505 S.E.2d at 371 (indicating that an "injunction prohibiting an interfering use" of an easement is appropriate "when the harm from the interfering use is irreparable and cannot be adequately addressed in damages"). Moreover, further consideration of the relevant "equities" supports Columbia's requested relief because Columbia's bargained for easement rights as the dominant estate holder, as well as the public interest in safeguarding underground high-pressure natural gas transmission lines, vastly outweigh Grove's interest in saving money by constructing an asphalt crossing without necessary mitigation measures.²⁶

²⁶ As suggested herein, had case-specific evidence effectively demonstrated that Grove's proposed surface activities would not endanger the integrity of the underground Pipelines, nor materially obstruct/delay access to such Pipelines, the balancing of the equities would likely yield a different

For the reasons stated herein, the Court **GRANTS** Columbia's request for a declaration that the crossing as proposed by Grove, would violate Columbia's rights under the ROW Agreements, and that Grove is therefore enjoined from building its proposed crossing in accordance with its submitted plans, which did not include the installation of mitigation measures, including, most importantly, "flowable fill" installed to ensure that vehicular weight does not damage the buried pipelines.


The Court **DENIES** Grove's request for declaratory relief that would permit Grove to proceed with the development as proposed. For the same reasons discussed herein, Grove has failed to carry its burden to demonstrate that it is entitled to declaratory relief. The Court makes this finding because the proposed road, if constructed without the mitigation measures necessitated by the case-specific conditions, would unreasonably interfere with Columbia's easement rights.

The Clerk is **REQUESTED** to send a copy of this Opinion and Order to all counsel of record.

IT IS SO ORDERED.

Norfolk, Virginia
January 8, 2019

result.



Mark S. Davis
CHIEF UNITED STATES DISTRICT JUDGE

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Clerk US District Court
Norfolk, Virginia

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